

Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: CORELITE

Report Number: P518464

Luminaire Tested: **SQ4-BB-050U-100D-940-1D-UNV-STD-W-4**

Issue Date: 4/29/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P518464  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-536-21, G2-2009-966-12)  
Test Lab: INNOVATION CENTER  
Issue Date: 4/29/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: CORELITE  
Catalog Number: SQ4-BB-050U-100D-940-1D-UNV-STD-W-4  
Description: CORELITE SQ4 SUSPENDED LED LUMINAIRE WITH BLACK BAFFLE  
DOWNLIGHT 1000 LUMENS PER FOOT  
UPLIGHT 500 LUMENS PER FOOT  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

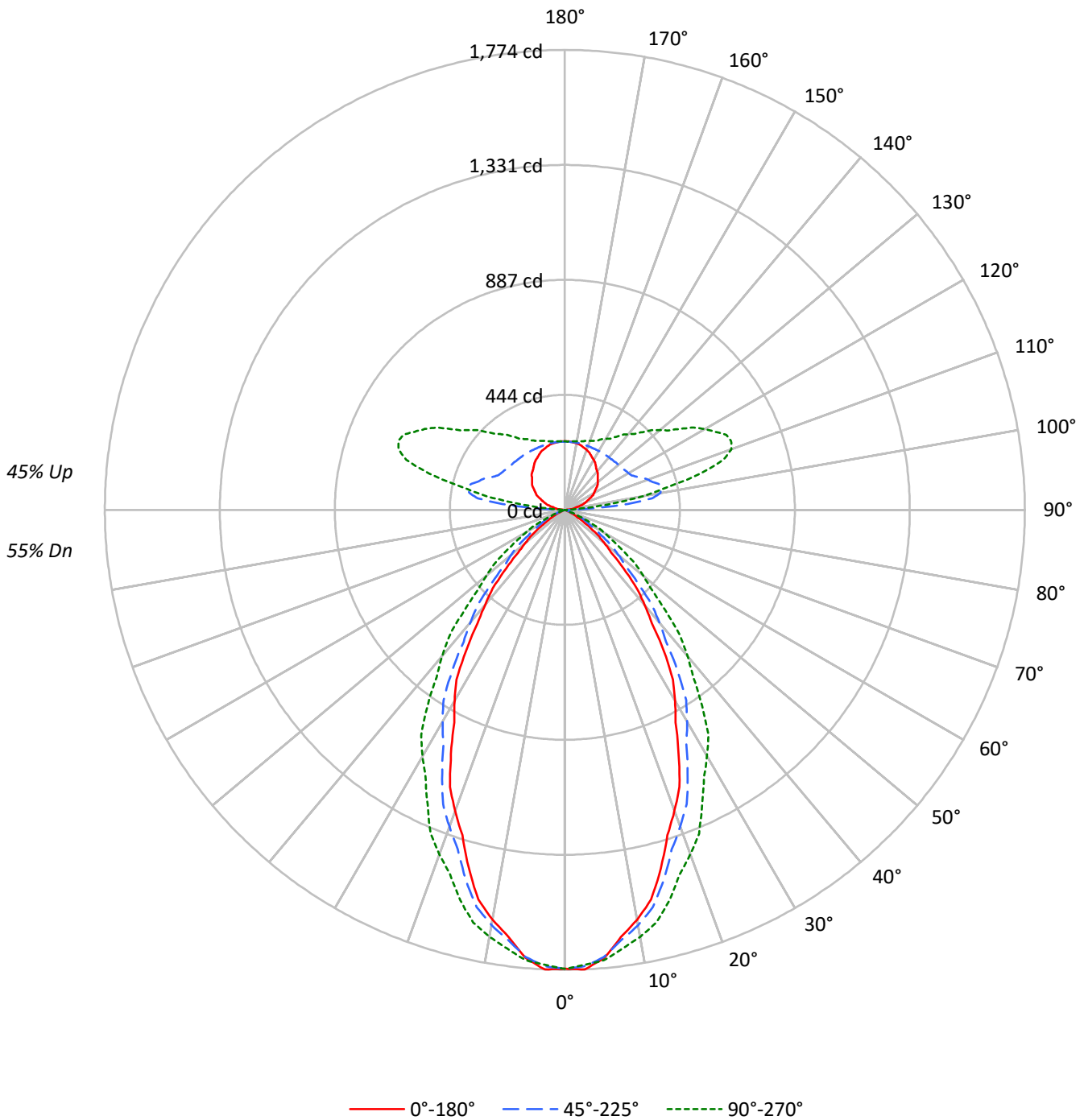
Lumens per Lamp: N/A  
Luminaire Lumens: 3834.8 lumens  
Efficiency: N/A  
Efficacy: 85.0 lumens/watt  
Spacing Criteria (0/90/45): 0.85 / 0.97 / 0.97  
Luminous Opening: Rectangular (W 0.29' x L: 4' x H: 0')  
CIE Type: General Diffuse

Input Watts (W): 45.1  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

|     |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |    |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|----|----|----|
| RF  | 20  |     |     |     | 20  |     |     |     | 20 |    |    |    | 20 |    |    |    | 20 |    |
| RC  | 80  |     |     |     | 70  |     |     |     | 50 |    |    |    | 30 |    |    |    | 10 | 0  |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 0  |
| RCR |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |    |
| 0   | 108 | 108 | 108 | 108 | 101 | 101 | 101 | 101 | 86 | 86 | 86 | 73 | 73 | 73 | 61 | 61 | 61 | 55 |
| 1   | 101 | 97  | 94  | 91  | 94  | 91  | 88  | 86  | 78 | 77 | 75 | 67 | 66 | 65 | 57 | 56 | 55 | 50 |
| 2   | 94  | 87  | 82  | 78  | 87  | 82  | 77  | 74  | 71 | 68 | 65 | 61 | 59 | 57 | 52 | 51 | 50 | 45 |
| 3   | 87  | 79  | 72  | 67  | 81  | 74  | 68  | 64  | 65 | 61 | 57 | 56 | 53 | 51 | 48 | 46 | 45 | 41 |
| 4   | 80  | 71  | 64  | 59  | 75  | 67  | 61  | 56  | 59 | 54 | 51 | 52 | 48 | 46 | 45 | 42 | 40 | 37 |
| 5   | 75  | 65  | 57  | 52  | 70  | 61  | 55  | 50  | 54 | 49 | 45 | 47 | 44 | 41 | 41 | 39 | 37 | 34 |
| 6   | 70  | 59  | 52  | 46  | 65  | 56  | 49  | 45  | 49 | 44 | 41 | 44 | 40 | 37 | 38 | 36 | 33 | 31 |
| 7   | 65  | 54  | 47  | 42  | 61  | 51  | 45  | 40  | 46 | 41 | 37 | 40 | 37 | 34 | 36 | 33 | 31 | 28 |
| 8   | 61  | 50  | 43  | 38  | 57  | 47  | 41  | 36  | 42 | 37 | 34 | 38 | 34 | 31 | 33 | 30 | 28 | 26 |
| 9   | 57  | 46  | 39  | 34  | 53  | 44  | 37  | 33  | 39 | 34 | 31 | 35 | 31 | 28 | 31 | 28 | 26 | 24 |
| 10  | 54  | 42  | 36  | 31  | 50  | 40  | 34  | 30  | 36 | 32 | 28 | 33 | 29 | 26 | 29 | 26 | 24 | 22 |

**AVERAGE LUMINANCE (cd/sqm):**

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 16333 | 16333 | 16333 |
| 5°  | 16070 | 16031 | 16149 |
| 10° | 15036 | 15237 | 15662 |
| 15° | 13669 | 14103 | 14889 |
| 20° | 12134 | 12765 | 13883 |
| 25° | 10567 | 11404 | 12756 |
| 30° | 9051  | 10046 | 11688 |
| 35° | 7505  | 8527  | 10399 |
| 40° | 5767  | 6818  | 8861  |
| 45° | 4169  | 5163  | 7129  |
| 50° | 2839  | 3848  | 5655  |
| 55° | 1847  | 2783  | 4395  |
| 60° | 1059  | 1960  | 3176  |
| 65° | 279   | 1196  | 1609  |
| 70° | 138   | 370   | 461   |
| 75° | 61    | 32    | 0     |
| 80° | 48    | 0     | 0     |
| 85° | 0     | 0     | 0     |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 161.6  | 4.2       |
| 10°-20°   | 413.2  | 10.8      |
| 20°-30°   | 517.2  | 13.5      |
| 30°-40°   | 477.8  | 12.5      |
| 40°-50°   | 321.0  | 8.4       |
| 50°-60°   | 165.8  | 4.3       |
| 60°-70°   | 51.9   | 1.4       |
| 70°-80°   | 3.3    | 0.1       |
| 80°-90°   | 1.1    | 0.0       |
| 90°-100°  | 126.6  | 3.3       |
| 100°-110° | 343.9  | 9.0       |
| 110°-120° | 353.6  | 9.2       |
| 120°-130° | 282.7  | 7.4       |
| 130°-140° | 222.2  | 5.8       |
| 140°-150° | 170.3  | 4.4       |
| 150°-160° | 122.5  | 3.2       |
| 160°-170° | 74.9   | 2.0       |
| 170°-180° | 25.2   | 0.7       |
| 0°-30°    | 1091.9 | 28.5      |
| 0°-40°    | 1569.7 | 40.9      |
| 0°-60°    | 2056.5 | 53.6      |
| 0°-90°    | 2112.8 | 55.1      |
| 90°-120°  | 824.1  | 21.5      |
| 90°-150°  | 1499.3 | 39.1      |
| 90°-180°  | 1722.0 | 44.9      |
| 0°-180°   | 3834.8 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 1770 | 1770  | 1770 | 1770  | 1770 |      |
| 5°   | 1735 | 1718  | 1731 | 1737  | 1744 | 161  |
| 15°  | 1431 | 1426  | 1476 | 1526  | 1559 | 399  |
| 25°  | 1038 | 1046  | 1120 | 1197  | 1253 | 476  |
| 35°  | 666  | 683   | 757  | 846   | 923  | 413  |
| 45°  | 320  | 339   | 396  | 473   | 546  | 251  |
| 55°  | 115  | 134   | 173  | 222   | 273  | 107  |
| 65°  | 13   | 25    | 55   | 66    | 74   | 22   |
| 75°  | 2    | 2     | 1    | 0     | 0    | 2    |
| 85°  | 0    | 0     | 0    | 0     | 0    | 0    |
| 90°  | 1    | 3     | 6    | 8     | 8    | 1    |
| 95°  | 19   | 69    | 220  | 96    | 64   | 20   |
| 105° | 61   | 95    | 378  | 576   | 542  | 65   |
| 115° | 108  | 132   | 303  | 602   | 686  | 107  |
| 125° | 149  | 170   | 274  | 462   | 544  | 133  |
| 135° | 180  | 200   | 266  | 376   | 424  | 139  |
| 145° | 208  | 223   | 263  | 319   | 343  | 130  |
| 155° | 235  | 243   | 261  | 287   | 295  | 108  |
| 165° | 254  | 258   | 262  | 273   | 274  | 72   |
| 175° | 264  | 265   | 263  | 266   | 265  | 25   |
| 180° | 264  | 264   | 264  | 264   | 264  |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 1770.3 | 1770.3 | 1770.3 | 1770.3 | 1770.3 |
| 2.5°   | 1774.4 | 1757.7 | 1762.1 | 1762.0 | 1757.3 |
| 5°     | 1735.2 | 1717.6 | 1730.9 | 1737.0 | 1743.7 |
| 7.5°   | 1661.9 | 1648.1 | 1673.7 | 1692.8 | 1706.7 |
| 10°    | 1605.0 | 1593.3 | 1626.4 | 1652.5 | 1671.8 |
| 12.5°  | 1539.2 | 1530.2 | 1570.2 | 1606.1 | 1630.7 |
| 15°    | 1431.1 | 1426.1 | 1476.5 | 1526.1 | 1558.8 |
| 17.5°  | 1315.3 | 1315.2 | 1372.7 | 1434.3 | 1473.6 |
| 20°    | 1235.9 | 1238.4 | 1300.1 | 1368.0 | 1414.0 |
| 22.5°  | 1156.4 | 1162.3 | 1228.2 | 1298.9 | 1351.7 |
| 25°    | 1038.0 | 1046.4 | 1120.2 | 1196.9 | 1253.0 |
| 27.5°  | 924.3  | 936.5  | 1014.2 | 1093.9 | 1162.2 |
| 30°    | 849.6  | 863.8  | 943.0  | 1026.8 | 1097.1 |
| 32.5°  | 776.3  | 793.2  | 870.3  | 959.0  | 1030.7 |
| 35°    | 666.3  | 683.1  | 757.1  | 846.2  | 923.3  |
| 37.5°  | 552.8  | 569.2  | 641.5  | 729.2  | 812.4  |
| 40°    | 478.8  | 497.2  | 566.1  | 651.1  | 735.7  |
| 42.5°  | 411.6  | 430.0  | 494.9  | 578.4  | 658.3  |
| 45°    | 319.5  | 338.7  | 395.7  | 472.7  | 546.4  |
| 47.5°  | 243.1  | 264.0  | 314.0  | 383.7  | 450.8  |
| 50°    | 197.8  | 218.8  | 268.1  | 329.5  | 394.0  |
| 52.5°  | 161.5  | 181.8  | 226.3  | 284.1  | 343.3  |
| 55°    | 114.8  | 134.0  | 173.0  | 222.1  | 273.2  |
| 57.5°  | 79.3   | 95.9   | 130.9  | 171.9  | 211.9  |
| 60°    | 57.4   | 73.3   | 106.2  | 139.5  | 172.1  |
| 62.5°  | 38.2   | 52.8   | 85.0   | 110.5  | 132.4  |
| 65°    | 12.8   | 24.6   | 54.8   | 66.1   | 73.7   |
| 67.5°  | 6.5    | 7.8    | 28.8   | 30.4   | 32.9   |
| 70°    | 5.1    | 5.1    | 13.7   | 14.6   | 17.1   |
| 72.5°  | 3.8    | 3.8    | 5.5    | 7.0    | 7.5    |
| 75°    | 1.7    | 1.7    | 0.9    | 0.0    | 0.0    |
| 77.5°  | 0.9    | 0.9    | 0.7    | 0.0    | 0.0    |
| 80°    | 0.9    | 0.9    | 0.0    | 0.0    | 0.0    |
| 82.5°  | 0.2    | 0.2    | 0.0    | 0.0    | 0.0    |
| 85°    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 87.5°  | 0.2    | 0.7    | 1.2    | 1.5    | 1.5    |
| 90°    | 0.8    | 3.3    | 5.9    | 7.6    | 7.6    |
| 92.5°  | 7.6    | 34.7   | 60.2   | 25.9   | 21.9   |
| 95°    | 18.7   | 69.2   | 220.5  | 96.0   | 64.4   |
| 97.5°  | 30.9   | 76.5   | 338.0  | 263.0  | 184.7  |
| 100°   | 39.0   | 81.3   | 374.0  | 379.1  | 306.1  |
| 102.5° | 47.1   | 86.1   | 383.5  | 468.8  | 404.5  |
| 105°   | 61.1   | 95.1   | 378.2  | 575.9  | 541.9  |
| 107.5° | 75.5   | 105.5  | 356.3  | 631.1  | 640.6  |
| 110°   | 85.6   | 113.0  | 340.1  | 642.0  | 682.6  |



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**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 94.5  | 120.5 | 323.8 | 633.0 | 694.2 |
| 115°   | 108.5 | 131.8 | 302.7 | 602.3 | 686.0 |
| 117.5° | 121.8 | 144.0 | 289.3 | 558.8 | 653.1 |
| 120°   | 130.6 | 152.2 | 283.2 | 529.6 | 623.3 |
| 122.5° | 138.1 | 159.6 | 279.2 | 500.3 | 590.7 |
| 125°   | 149.2 | 170.0 | 273.9 | 461.5 | 544.4 |
| 127.5° | 159.3 | 179.8 | 271.0 | 432.1 | 503.2 |
| 130°   | 165.4 | 185.3 | 269.7 | 413.6 | 477.4 |
| 132.5° | 171.5 | 191.4 | 268.3 | 397.8 | 454.4 |
| 135°   | 179.8 | 199.7 | 266.3 | 375.9 | 424.0 |
| 137.5° | 188.8 | 206.8 | 265.3 | 356.6 | 397.0 |
| 140°   | 194.2 | 211.6 | 264.6 | 344.3 | 380.8 |
| 142.5° | 199.6 | 215.7 | 263.9 | 334.6 | 365.2 |
| 145°   | 207.8 | 222.7 | 262.9 | 319.4 | 343.4 |
| 147.5° | 216.9 | 229.7 | 262.0 | 307.4 | 326.3 |
| 150°   | 223.0 | 233.8 | 262.0 | 300.5 | 315.5 |
| 152.5° | 227.8 | 237.2 | 261.4 | 294.4 | 306.6 |
| 155°   | 234.9 | 243.2 | 261.2 | 286.8 | 295.1 |
| 157.5° | 241.9 | 248.3 | 261.2 | 281.7 | 288.0 |
| 160°   | 245.9 | 251.7 | 261.2 | 278.3 | 283.2 |
| 162.5° | 250.0 | 254.5 | 261.9 | 275.5 | 279.2 |
| 165°   | 254.4 | 257.7 | 262.0 | 273.1 | 273.9 |
| 167.5° | 259.0 | 260.6 | 262.9 | 270.2 | 270.9 |
| 170°   | 260.3 | 262.0 | 262.9 | 268.8 | 268.8 |
| 172.5° | 261.7 | 262.7 | 262.9 | 267.5 | 267.5 |
| 175°   | 263.7 | 264.6 | 262.9 | 266.3 | 265.4 |
| 177.5° | 264.4 | 264.4 | 262.4 | 265.1 | 263.7 |
| 180°   | 263.7 | 263.7 | 263.7 | 263.7 | 263.7 |

(END OF REPORT)